

## ABSTRACT OF THE DISCLOSURE

A process for producing compound semiconductor single crystal, comprises the steps of: putting a compound semiconductor raw material into a crucible, setting the crucible in a vertical type of heating furnace to heat and melt the raw material by a heater, promoting a nucleation on a surface of a raw material melt by leaving a solid raw material in a part of the raw material melt, solidifying the raw material melt gradually from the surface of the raw material melt without a seed crystal, and growing a crystal by using a nucleus generated by the nucleation.